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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/993,519	11/27/2001	Jong Tak Kim	P-0283	8132
34610	7590	02/21/2006	EXAMINER	
FLESHNER & KIM, LLP P.O. BOX 221200 CHANTILLY, VA 20153			FERRIS, DERRICK W	
			ART UNIT	PAPER NUMBER
			2663	

DATE MAILED: 02/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/993,519

Applicant(s)

KIM, JONG TAK

Examiner

Derrick W. Ferris

Art Unit

2663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3,4,6-12 and 14-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,3,4,6-12,14 and 15 is/are allowed.
- 6) ☒ Claim(s) 16-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Response to Amendment*

1. This Office action is in response to applicant's amendment filed 12/27/2005. Please note that claims 1 and 9 as amended are considered allowable. Claims 16, 20, and 21 as amended are rejected based on a new rejection as necessitated by amendment. In particular, please note that claims 1 and 9 are allowable based on the further clarification of what is being reported with respect to *resource utilization information* (i.e., packet holding times) and in particular "wherein each of the plurality of packet processors reports the respective accumulated packet holding time periodically based on a period set by the user" or equivalent. Based on the new rejection, no further argument was provided yet by applicant.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 16-25** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,928,482 B1 to *Ben Nun et al.* ("*Ben Nun*") in view of "Overview and Capacity of the GPRS (General Packet Radio Service) to *Ferrer et al.* ("*Ferrer*") and in further view of U.S. Patent No. 4,974,256 A to *Cyr et al.* ("*Cyr*").

As to **claim 16**, *Ben Nun* discloses receiving a packet at a central control unit 205, see e.g., figure 2. The central control unit compares loads supported by a plurality of packet processors, see e.g., column 13, lines 15-40 and also column 13, lines 40-60 with

respect to the processing of a flow (i.e., call) and the processing of a particular type of flow (i.e., note that load balancing is also performed within a flow). The plurality of packet processors are shown e.g., as packet processors 1-N in figure 2. Assigning the packet to a first packet processor having a first load that is no larger than a second load supported by any other of the plurality of packet processors is taught e.g., at column 12, lines 16-37 and in particular at column 13, lines 15-40 since the processor with the smallest load is selected.

*Ben Nun* may be silent or deficient to the further limitation of a call connection. In particular, *Ben Nun* teaches load balancing for a packet network.

*Ferrer* teaches the further recited limitation above in combination at e.g., the right-hand column on page 106 since *Ferrer* teaches that WLL uses packets (i.e., a call connection).

The proposed modification of the above-applied reference(s) necessary to arrive at the claimed subject matter would be to modify *Ben Nun* by clarifying that the call connections are packet flows since the packets are routed by address.

As such, examiner notes that it would have been obvious to one skilled in the art prior to applicant's invention to include the above limitation. In particular, the motivation for modifying the reference or to combine the reference teachings would be to transport packets over a wireless network. In particular, *Ben Nun* cures the above-cited deficiency by providing a motivation found at e.g., the right-hand column on page 106 since packets are transported in a GSM network and a GSM network is a candidate for WLL. Thus the references teach the above claim limitation(s).

*Ben Nun* and *Ferrer* may be further silent or deficient to comparing the resource utilization information, wherein each of the plurality of packet processing circuits reports resource utilization information periodically based on a period set by a user.

*Cyr* teaches the above limitation at issue, at e.g., column 3, line 50 to column 4, line 15 in view of figure 3. In particular, *Cyr* teaches that it is well known in the art to periodically report information for load balancing for a specific time period. In particular, *Cyr* teaches that a 10 second period is recommended for polling but that other polling intervals can also be used.

Thus the examiner notes that it would have been obvious to one skilled in the art prior to applicant's invention to include the above limitation at issue. In particular, one skilled in the art would have been motivated to make the above motivation for at least polling a device for a specific amount of time to obtain an average. As such, *Cyr* teaches the above motivation at e.g., column 4, lines 1-15.

As to **claim 17**, the packet processor is assigned based on the load information, see e.g., column 3, lines 15-60 of *Ben Nun*. Thus the corresponding resource utilization is no greater than any one of the other plurality of packet processing circuits.

As to **claim 18**, the packet processor is assigned based on the load information, see e.g., column 3, lines 15-60 of *Ben Nun*.

As to **claim 19**, see e.g., column 15, lines 46-63 with respect to the resource utilization of each of the plurality of packet processing circuits which is a ratio of a processing duty cycle determined by a ratio of a busy time of the respective packet processing circuits to a duty period. In particular, *Ben Nun* teaches the processing load of

Art Unit: 2663

a particular processor is inversely proportional to the amount of time that particular processor is in the idle mode. In other words, the idle time is either the hold time or busy time of the processor. With respect to the busy time is a cumulative time each of the respective packet processing circuits devotes to processing the packet data during a duty cycle, see e.g., column 15, line 65 – column 16, line 25 with respect to figure 6 of *Ben Nun* where a cumulative time is the amount of time that the processors are in the idle mode.

As to **claim 20**, see similar rejection to claim 16. Note that the terminals are the source nodes as taught by *Ben Nun*.

As to **claims 21**, see similar rejection to claim 16.

As to **claim 22**, see similar rejection to claim 17.

As to **claim 23**, see similar rejection to claim 18.

As to **claim 24**, see similar rejection to claim 19.

As to **claim 25**, see similar rejection to claim 16. Note that the terminals are the source nodes as taught by *Ben Nun* and that WLL, used in combination, is a wireless connection. Also the motivation is the same as mentioned in claim 1.

#### ***Allowable Subject Matter***

4. **Claims 1, 3, 4, 6-8, 9-12, 14, and 15** are allowed.

#### ***Conclusion***

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Derrick W. Ferris whose telephone number is (571) 272-3123. The examiner can normally be reached on M-F 9 A.M. - 4:30 P.M. E.S.T.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on (571)272-3134. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Derrick W. Ferris  
Examiner  
Art Unit 2663

Application/Control Number: 09/993,519

Page 7

Art Unit: 2663

  
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 2/14/06  
**DERRICK FERRIS**  
**PATENT EXAMINER**